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Checking Mountain Soil Moisture Under the Snow, an important factor in snowmelt runoff.

Federal-State Cooperative
Snow Surveys and Water Supply Forecasts
for

Colorado River, Rio Grande, Platte River and Arkansas River Drainage Basins

SOIL CONSERVATION SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AND

COLORADO AGRICULTURAL EXPERIMENT STATION

AND

STATE ENGINEER OF NEW MEXICO

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Data included in this report were obtained by the agencies named above in cooperation with the U.S. Forest Service, National Park Service, Bureau of Reclamation, State Engineers of Colorado and Wyoming; and other Federal, State and local organizations.

APR. 1, 1956

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNCW SURVEY AND WATER SUPPLY FORECAST REPORTS:

Snow surveys in the West are conducted each year at more than 1200 snow courses. Basin and Province or State snow survey reports summarizing the results of the measurements and forecasts of seasonal runoff and water supply are issued by the Soil Conservation Service, U. S. Department of Agriculture and some of its cooperators; the Water Rights Branch of the British Columbia Department of Lands and Forests; and the California Division of Water Resources.

Copies of the various federal-state cooperative snow survey reports listed below may be secured by writing to:

Head, Water Supply Forecasting Section Soil Conservation Service 209 S. W. 5th Avenue Portland 4, Oregon

BASIN REPORTS:

		Issued monthly February through May by SCS and Colorado Experiment Station, Fort Collins, Colorado.*
	Columbia River Basin	Issued monthly January through May by Soil Conservation Service, Boise, Idaho.*
	Upper Missouri River Basin	Issued monthly February through May by SCS and Montana Agricultural Experiment Station, Bozeman, Montana.*
		Issued April 1 by Soil Conservation Service and Cooperators, Portland, Oregon.
ST	TATE REPORTS:	
	Arizona	Issued semi-monthly January 15 through April 1 by SCS and Salt River Valley Water Users Association, Phoenix Arizona.*
-	Nevada	Issued monthly February through April by SCS and Nevada State Engineer, Reno, Nevada.*
	Oregon	Issued monthly January through May by SCS, Portland, Oregon, and Oregon Agricultural Experiment Station.*
	Utah	Issued monthly January through May by SCS, Salt Lake City, Utah, and State Engineer of Utah and Utah Agricultural Experiment Station.*
	Washington	Issued monthly February through May by SCS, Spokane, Washington, and State Department of Conservation and Development.*
	Wyoming	Issued monthly February through May by SCS, Casper, Wyoming, and State Engineer of Wyoming.*
		*Special reports are issued as needed.

The British Columbia reports are issued February 1 through June 1 and may be secured from Comptroller, Water Rights Branch, Department of Lands and Forests, Parliament Buildings, Victoria, B.C.

The California reports are issued monthly February 1 through May 1 and may be secured from Division of Water Resources, California Department of Public Works, Sacramento, California.

The annual water supply forecasts of the Weather Bureau are available in monthly bulletins published from January through May. These bulletins entitled, "Water Supply Forecasts for the Western United States' may be obtained from River Forecast Center, Weather Bureau, 712 Federal Office Building, Kansas City 6, Missouri.

FEDERAL-STATE COOPERATIVE

SNOW SURVEYS AND WATER SUPPLY FORECASTS

for

COLORADO RIVER, PLATTE RIVER ARKANSAS RIVER AND RIO GRANDE DRAINAGE BASINS

Issued

April 7, 1956

Report Prepared By (1)
Homer J. Stockwell, Snow Survey Leader
Fort Collins, Colorado
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Fort Collins, Colorado

Soil Conservation Service
and
Colorado Agricultural Experiment Station
Fort Collins, Colorado
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State Engineer of Colorado
Denver, Colorado
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S. E. Reynolds State Engineer State of New Mexico

General Series Paper No. 636 Colorado Agricultural Experiment Station

⁽¹⁾ Snow Survey measurements in Wyoming, Utah, and Arizona are supplied by Snow Survey Supervisors in these states,



WATER SUPPLY OUTLOOK COLORADO RIVER, PLATTE RIVER ARKANSAS RIVER AND RIO GRANDE

April 1, 1956

March increase in snow pack was far short of normal but the water supply outlook for southern Wyoming and most of Colorado is much improved over the past two years. Summer runoff will be normal or above for most of Colorado and southern Wyoming. Less than normal runoff is expected for the Rio Grande and Colorado Rivers tributaries in scuthwestern Colorado and northern New Mexico. The flow of the Rio Grande in New Mexico will be much like the past three years at less than half of normal unless there is heavy spring precipitation. In Arizona winter snowfall has been light with snow-melt season streamflow at less than one-half of normal.

Irrigation water supply outlook for most of Colorado continues to be much improved over the past two years as of April 1. In the northern mountains of the state, including the headwaters of the Platte, Upper Colorado and Yampa Rivers the snow pack is 110 to 125 percent of normal. The snow pack declines to near normal on the Arkansas and Gunnison Rivers in central Colorado and is generally less than normal on the Rio Grande and San Juan and their tributaries in southern Colorado and northern New Mexico. The outlook for the Rio Grande in San Luis Valley is only slightly improved over a year ago. Along the Rio Grande in New Mexico streamflow is expected to be about the same as for the 1955 season.

Mountain snowfall over the entire southern Rocky Mountain region was very light during March except at the highest elevations in northern Colorado and adjacent areas in Wyoming. Warm temperatures during the last two weeks of March caused unusually early snow-melt at low and medium elevations and a high density snow pack at elevations above 10,000 feet.

Mountain soils under the snow in areas exposed to the sun are generally saturated as a result of snow-melt. In wooded areas snow-melt has not been sufficient to wet the soil more than a few inches.

Streams are starting to rise in western Colorado and on the North Platte but no material early season increases in Streamflow have been noted on the South Platte, Arkansas or Rio Grande.

The water supply outlook for Arizona continued to decline during March and forecasts are not expected to exceed 40 percent of normal on any stream. Reservoir storage is down slightly from a year ago. There is also a reduction in forecasts for Colorado River tributaries in Utah during March due to lack of snowfall during the month. Snowpack ranges from near normal in northern Utah to 50 percent of normal in southern Utah. On the headwaters of the Green River in Wyoming snow is well above normal.

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NORTH PLATTE

The April 1 snow pack on the North Platte drainage in Colorado and Wyoming is 15 percent above normal for this date but represents a substantial decline over a month ago. Early season snow-melt has occurred on low elevation snow courses and a general rise in stream flow is reported. Soil moisture under the snow is above normal in Wyoming and near normal along the Continental Divide in Colorado. The inflow to the North Platte Reservoir system will equal the flow of any recent year except 1952. Storage in the four major reservoirs on the North Platte in Wyoming now totals about 900,000 acre-feet as compared to nearly 1,000,000 a year ago. Of this amount 720,000 acre-feet is assigned to the Kendrick Project and 190,000 to the older North Platte Project. Soil moisture conditions in irrigated areas of the North Platte Valley in eastern Wyoming and western Nebraska are fair to good.

On the Laramie River soil moisture conditions in the Laramie and Wheatland areas are poor. Reservoirs serving both areas are practically empty. The snow pack on the Laramie watershed continues to be very high and summer runoff will be considerably above normal.

SOUTH PLATTE

Snowfall on the South Platte watershed during March was limited to elevations near 10,000 feet and higher. Due to warm temperatures in late March there was unusual early season melting at medium and low elevations. At the 9,000 foot level there is slightly less snow pack than on March 1. However, the early season snow was heavy and on April 1 the seasonal snow accumulation was still about 25 percent above normal. Summer flow of all major South Platte tributaries should be at least normal in 1956. The outlook is much improved over this date in 1954 and 1955. Soil moisture conditions in irrigated areas are relatively good as compared to the past two years. There has not been any increase in stream flow due to early season snow-melt but mountain soils in exposed locations are becoming saturated.

In appraising the outlook, local shortages of water must be expected because demands usually exceed the normal supply in this highly developed irrigated area.

Storage in smaller irrigation reservoirs is still below average but above April 1, 1955 on both the upper tributaries and the lower South Platte. This shortage will have an adverse affect on water supply outlook in a few areas but it is not as serious as a year ago. In the Colorado-Big Thompson system there is now stored 210,000 acre-feet as compared to 320,000 a year ago and 518,000 on April 1, 1954. Inflow to Granby Reservoir on the west slope is expected to be about 375,000 acre-feet for the summer period which should increase storage in this system for future water years.

Soil moisture conditions in irrigated areas are reported fair to good. Current stream flow is about normal for early season.

ARKANSAS

The water supply outlook for the Arkansas River declined during March in line with the remainder of the state, but is much improved over the past

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two years. The total snow pack on the upper watershed is slightly above normal with the heavier snow pack in the Leadville area. Snow cover on the Sangre de Cristo range continued to decline during March and is less than half of normal for this date. Winter precipitation in irrigated areas has been relatively light and soils are dry. The summer flow of the Arkansas River at Salida should be near normal. At lower elevations through the main irrigated area flow will range down to 75 percent of normal. About one-half normal runoff will occur on the Huerfano, Cucharas and Purgatoire Rivers. Storage in upstream and plains reservoirs has improved slightly over a year ago but is below the usual carryover storage. There is 42,000 acre-feet of stored water remaining in John Martin Reservoir of the over 200,000 acre-feet stored in the flood of May, 1955. The general water supply outlook for the Arkansas River is only fair but somewhat improved over the past two years.

COLORADO

The water supply outlook for all areas of western Colorado is still good even if harch snowfall has been light. Stream flow will probably be greater than the April 1 snow pack would indicate. Temperatures during the last two weeks of March were warm. Snow-melt occurred early in the season. Soils under the snow at medium mountain elevations are saturated and streams are starting to rise at an early date. At high elevations the snow pack is dense and ready for melt almost comparable to May 1 conditions. Except at the highest elevations the total snow pack declined in western Colorado during Mareh which has not occurred during the past 20 years of snow survey records.

The best outlook for snow-melt season stream flow is on the Upper Colorado and its tributaries. Above normal flow may also be expected on the Yampa and White Rivers. On the Gunnison River the water supply outlook is near normal. The San Juan and Dolores Rivers and their tributaries will have about three-quarters of normal flow during the 1956 season. Irrigation water supplies should be adequate along the main streams. Shortages may occur in irrigated areas along the smaller tributary streams if rainfall during the late summer months is deficient. The flow of the San Juan River through New Mexico should be about three-quarters of normal and adequate to meet demands.

Soil moisture conditions in nearly all of the irrigated sections of western Colorado are reported as good. Because of early snow-melt stream flow is generally above normal depending on daily temperatures. Except for Green Mountain Reservoir, a part of the Colorado-Big Thompson system, storage in west slope reservoirs is less than for April 1 a year ago. Prospects for improving storages are good.

In Arizona there is no improvement in the water supply outlook. There was very little snowfall during March. Stream flow forecasts are less than for a month ago of not more than 40 percent of normal for any stream.

The snow pack on the Colorado River in Utah declined substantially in respect to normal during March. Total seasonal snowfall is near normal on the Duchense River and drops to about 50 percent of normal on the Virgin River and other Colorado River tributaries in southeastern Utah.

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Snow cover on the Upper Green River in Wyoming is 35 percent above average and a high runoff from this area is expected.

Inflow to Lake Mead will be about normal for the snow-melt season at about 10,000,000 acre-feet. This is close to the total for the summer periods of 1954 and 1955.

RIO GRANDE

The water supply outlook for the Rio Grande declined substantially during March in both the San Luis Valley of Colorado and through New Mexico. The March increase in snow cover at high elevations along the Continental Divide in Colorado was far short of normal. Losses in snow pack due to melting occurred even at elevations between 10,000 and 11,000 feet in open areas. Below 9,000 feet the snow pack has practically disappeared. Soil moisture in mountain areas has improved but the present stream flow is only about normal for this date above Albuquerque and less than normal into Elephant Butte.

Storage in San Luis Valley reservoirs is a little above that for April 1, 1955 but less than for the long-term average. Sanchez Reservoir on the Culebra River now contains about 13,500 acre-feet as compared to 3,800 a year ago. In northern New Mexico El Vado Reservoir is near empty. Storage in Elephant Butte and Caballo Reservoirs is now about 200,000 acre-feet as compared to 150,000 a year ago and only 20 percent of average.

The heavy early season snow pack before February 1 indicated that the water supply outlook for the Rio Grande would be improved in 1956 over the past three years. However, the increase in snow pack during February and March was almost a minimum of record. This has reduced the water supply outlook for the San Luis Valley to only slightly better than the average of the past three years. Unless April and May precipitation is excessive in northern New Mexico, which is opposed to the 30=day forecasts, the water supply of the Rio Grande in New Mexico will be a repetition of drouth conditions of the past three years.

On the Pecos River snow-melt runoff will be near a minimum of record. The water supply outlook for the Carlsbad area is good because of carry-over storage and good soil moisture conditions in irrigated areas.

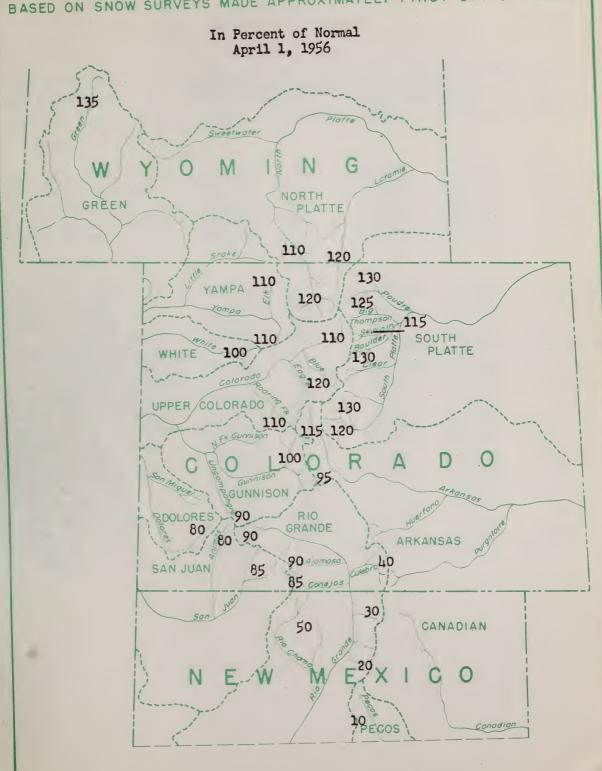
Storage in Conchas Reservoir on the Pucumcari project is 260,000 acrefeet as compared to 140,000 a year ago. The water supply outlook is fair based on increased water in storage. Snow-melt runoff on Canadian River tributaries will be very short.

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WATER CONTENT OF SNOW ON THE WATERSHEDS OF PLATTE, ARKANSAS, UPPER COLORADO AND RIO GRANDE BASINS BASED ON SNOW SURVEYS MADE APPROXIMATELY FIRST DAY OF MONTH





COOPERATIVE SNOW SURVEYS

STREAM FLOW FORECASTS

April 1, 1956

April-Sept., Incl., Streamflow Acre Feet 15-year									
		April-Sept., Incl., Streamflow Acre Feet							
BASIN AND STREAM	Forecast	% of	Measure		Average				
	1956	15-yr Avg.	1954	1953	1938-1952				
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GREEN									
Conservation of Tables	- (00 000								
Green at Linwood, Utah	1,600,000	123	1,011,000	957,000	1,302,000				
Little Snake at Lily	390,000	107	143,000	232,000	365,000				
Elk at Clark	230,000	107	120,000	164,000	214,000				
Yampa at Steamboat Spgs.	340,000	121	123,000	249,000	281,000				
White at Meeker	350,000	104	183,000	313,000	336,000				
COLORADO									
COIORADO				•					
Colorado nr Granby	265,000*	133	216,000*	197,000%	199,000*				
Willow nr Granby	50,000	116	20,000	32,000	43,000				
Frazer at Granby	120,000	119	20,000	102,000	101,000				
Blue abv Green Mt.Res.	375,000	122	128,000	277,000	307,000				
Colorado at Glenwood Spg			830,000*		1,540,000*				
Roaring Fork at Glenwood		106	364,000*	678,000*	777,000				
Plateau Creek at Collbra		81	32,000	41,000	62,000				
Uncompangre at Colona	130,000	76	59,000	114,000	170,000				
Surface Cr. nr Cedaredge	15,000	83	12,000	11,000	18,000				
Gunnison at Gr. Junction		83	342,000	953,000	1,510,000				
San Juan at Rosa, N.M.	550,000	78	352,000	370,000	703,000				
Piedra at Piedra	200,000	93	122,000	111,000	215,000				
Los Pinos nr Bayfield	200,000*		169,000*	122,000*	228,000*				
Florida nr Durango	50,000	72	40,000	34,000	69,000				
Animas at Durango	390,000	75	300,000	315,000	522,000				
La Plata at Hesperus	20,000	67	15,000	19,000	30,000				
Dolores at Dolores	210,000	73	137,000	176,000	314,000				
Colorado nr Grand	10,000,000		4,006,000	5,447,000	10,063,000				
Canyon, Arizona			4,000,000	794419000	10,000,000				

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-8-STREAM FLOW FORECASTS, April 1, 1956

	An	ril-Septembe	r. Incl.	Streamflow	, Acre Feet
BASIN AND STREAM	Forecast	1 % of		d Runoff	10 year Avg.
	1956	15 yr.Ave.		1 1953	1938-52
RIO GRANDE	<u> </u>			<u> </u>	
South Fork at South Fork Rio Grande at Del Norte Alamosa above Terrace Res. Conejos at Mogote Culebra at San Luis Rio Chama at Park View Costilla at Costilla Rio Grande at Otowi Bridge Rio Grande at San Marcial Pecos at Pecos	120,000 400,000* 60,000 165,000 150,000 18,000 375,000* 175,000* 30,000	77 75 50 65 53	67,000 294,000* 39,000 117,000 12,000 108,000 17,000 196,000* 44,000* 25,000	80,000 302,000* 52,000 143,000 15,000 114,000 20,000 298,000* 115,000* 41,000	132,000 565,000* 78,000 219,000 30,000 230,000 34,000 835,000* 604,000*
NORTH PLATTE					
Sweetwater at Alcova North Platte at Saratoga Medicine Bow near Hanna Laramie at Jelm Laramie at Lookout SOUTH PLATTE	91,000 775,000 135,000 130,000* .98,000	125 118 121 124 119	234,000 46,000* 8,000	42,000 428,000 60,000 64,000* 28,000	86,000 657,000 111,000 105,000* 82,000
Poudre at Canon Big Thompson at Drake Saint Vrain at Lyons Boulder at Orodell Clear Creek at Golden	250,000* 110,000* 95,000 55,000 150,000*	114 99 108 100 106	75,000* 44,000* 30,000 27,000 52,000*	114,000* 60,000* 61,000 52,000 117,000*	220,000* 111,000* 88,000 55,000 141,000*
ARKANSAS					
Arkansas at Salida Arkansas at Pueblo Cucharas at La Veta Purgatoire at Trinidad	310,000* 300,000* 7,000 20,000	96 75 44 35	158,000* 96,000* 6,000	320,000* 250,000* 5,000 36,000	323,000* 401,000* 16,000 57,000

^{*}Including Diversions and storage

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STATUS OF RESERVOIR STORAGE

BASIN AND STREAM RESERVOIR CAPACITY USABLE STORAGE - 1000 acre	STATUS OF RESERVOIR STORAGE								
RASIN AND STREAM	April 1, 1956								
Chous, A.F. 1956 1955 195h 15-year Avg.*	BASTN AND STREAM	RECERVICER		USA	TDINE STORE		o acre		
NISSOURI RIVER Foudre River Windsor 18.6 8.4 3.1 5.9 11.1	DASEN AND STREAM	TUDOLITY OLIT				1000	115-year Avg.*		
NISSUEN RIVER				1956	1955	1951			
Poudre River	MISSOURI BIVER			1-770	1 -//				
		Windsor	18.6	8.11	3.1	5.9	11.1		
" " Halligan 6 h h 0 3.8 h 1 h 5 h 5 h 4 h 0 3.8 h 1 h 5 h 5 h 1 h 5 h 6 h 1 h 0 3.2 2.5 h 1.9 m 1 m 1 h 1.5 h 1.5 h 1.5 h 1.5 h 1.7 h 1.5 h 1.7 h 1.5 h 1.7	tt tt								
	tr tt	Terry Lake							
	rt tt			4.0		2.5			
## ## Black Hollow					- 1.5		2.7		
Big Thompson River							3.4		
## ## Lone Tree 9,2 9,0 7,1 7,3 6,2 ## ## Mariano 5,4 0,7 0,3 3,7 2,5 ## Mariano 5,4 0,7 0,3 3,7 2,5 ## Mariano 12,4 56,3 68,2 21,5 ## Carter Lake 112,4 56,3 68,2 21,5 ## Union 12,7 1,6 1,0 6,1 7,1 ## Cheeseman 79,0 25,0 22,7 26,7 56,6 ## ## Marston 18,9 13,4 13,2 14,4 15,3 ## ## Marston 18,9 13,4 13,2 14,4 15,3 ## ## Marston 18,9 13,4 13,2 14,4 15,3 ## ## Milton 24,4 1,8 0,8 4,1 11,9 ## ## Marshall 10,3 1,6 0,8 0,8 2,9 ## ## ## Marshall 10,3 1,6 0,8 0,8 2,9 ## ## ## Marshall 10,3 1,6 0,8 0,8 2,9 ## ## ## Marshall 10,3 1,6 0,8 0,8 2,9 ## ## ## Marshall 10,3 1,6 0,8 0,8 2,9 ## ## ## Marshall 10,3 1,6 0,8 0,8 2,9 ## ## ## Marshall 10,3 1,6 0,8 0,8 2,9 ## ## ## Marshall 10,3 1,6 0,8 0,8 2,9 ## ## ## Marshall 10,3 1,6 0,8 0,8 2,9 ## ## ## Marshall 10,3 1,6 0,8 0,8 2,9 ## ## ## Marshall 10,3 1,6 0,0 0,0 ## ## ## Marshall 10,3 1,6 1,0 ## ## ## Marshall 10,3 1,0 ## ## ## M									
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STATUS OF RESERVOIR STORAGE

April 1, 1956

BASIN AND STREAM	RESERVOIR	USABLE CAPACIT:	Y .		AGE-1000 A April 1, 1	956
		(THOUS,	1956	1955	1954	15-yr.Avg. 1938-52
COLORADO DRAIMAGE Taylor River Los Pinos River Groundhog Creek Blue River Colorado River Colorado River Colorado River Colorado River Colorado River	Lake Havasu	106.2 126.3 21.7 116.9 27,935.0 688.0 1,810.0 467.5	40.6 48.2 45.0 48.2 10720.0 616.3 1717.7 105.3	54.1 65.0 4.0 42.6 11558.0 630.0 1755.0 156.2	53.1 34.2 3.2 54.8 15792.0 623.8 1761.0 372.9	63.3 38.7* 9.1 56.4* 18200.0 576.7*
SALT AND GILA DRAINA Salt River """ """ Verde River Aqua Fria River Gila River	Roosevelt Horse Mesa Mormon Flat Saguaro Bartlett Horseshoe Carl Pleasant San Carlos	1382,0 245.0 58.0 70.0 180.0 1430.0 173.0 1200.0	229-2 230-7 56-6 66-2 67-6 27-4 27-4 56-5	401-1 242-7 55-6 68-1 57-4 1-2 22-9 18.8	693.5 244-8 57.5 58.6 84.7 76.5 45.7	513-3 194-5 43-6 43-4 87-7* 31.2* 33.5 206.2
RIO GRANDE	Rio Grande Santa Maria Sanchez Terrace Continental Platoro Elephant Butte Caballo	45.0 45.0 103.0 17.7 26.7 60.0 2273.7 356.0	6.5 3.1 13.5 2.2 3.7 0.0 186.8 10.7	7.5 3.2 4.0 1.5 4.0 0.0 143.2 14.1	7.0 2.8 4.3 1.6 5.8 0.0 142.5 31.6	16.7 9.9 13.2 3.7 7.5 878.9 171.2
CHAMA RIVER	El Vado	226,0	0,3	0.0	0.0	46.6
CANADIAN RIVER	Conchas	600,0	261,3	143.3	166,2	261.7*
PECOS RIVER	Alamogordo McMillan-Avalo	148.0 on 45.0		82.6 30.8	34.5 4.8	56.7 16.7

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COOPERATIVE SNOW SURVEYS

SUMMARY OF SNOW MEASUREMENTS

April 1, 1956

	No. of	Years	Apr	il 1, 1	956 Water
WATERSHEDS	Courses	of			percent of
	Averaged	Record	1955	11954	Average
PLATTE RIVER					
Sweetwater	2	16-19	128	87	129
North Platte River	10	18-20	126	130	109
Laramie River	7	16-20	161	138	123
South Platte River*	3 6	16-20	111	138	117
Poudre River	6	16-20	166	160	132
Big Thompson River	2	15-18	162	155	125
St. Vrain River	1 2	20	191	144	112
Boulder Creek Clear Creek	2	18 - 20 14 - 20	161 178	159 19 7	134
orear oreek	۷	14-20	710	171	134
ARKANSAS RIVER	7	15-20	132	120	94
COLODADO DIUDO					
COLORADO RIVER Colorado River*	20	8-20	11,3	150	115
Roaring Fork		8-20	137	156	111
Plateau Creek	425283653	16-19	93	95	83
Yampa River	5	20	125	140	109
White River	2	19-20	108	122	99
Gunnison River Dolores River	8	9-20	106	115	87
Green River (Wyo)	3	19 - 20 17 - 20	140 161	138 109	70 7.26
San Juan River	Š	14-20	145	115	136 81
Animas River	3	19-20	130	164	92
Gila River	_	•			, -
Salt River					
Verde River					
Little Colo. River Williams River					
Lower Colo. River					
RIO GRANDE					
Rio Grande (Colo.)				4.	
Upper Rio Grande Alamosa River	3	17-20	124	164	90
Conejos River	3 2 2	16 -1 9 19 - 20	134 138	208 118	91 76
Culebra River		1/-20	100	TTO	10
Rio Grande (N.M.)	10	14-19	61	38	22
Chama River	4	14-20	134	81	49
Pecos River	4 3 3	14-19			
Canadian River	3	14-19	89	58	32

^{*} Above Glenwood Springs

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VALLEY PRECIPITATION Division Averages and Departures 3/

DRA INA GE	Sont Oo	Fall tNov. 1955,	Winter December thru February		
DIVISIONS	Average	Departure2/	Average	Departure2/	
NORTH PLATTE RIVER, Wyo.	2.07	-1.14	3.42	£ .42	
SOUTH PLATTE RIVER	1.80	-1.35	1.25	34	
ARKANSAS RIVER	1.45	-1.53	1.83	49	
COLORADO RIVER	3.16	-1.52	6.95	≠ 1.73	
GREEN River, Wyo.	2.26	49	2.40	<i>←</i> •49	
SAN JUAN River, New Mexico	•65	-2.49	2.98	/ .18	
COLORADO RIVER, Arizona	.44	76			
GILA River, Arizona	•96	-3.36			
CANADIAN RIVER, New Mexico	2,55	-1.09	•95	87	
RIO GRANDE, Coloc	•83	-1.63	1.44	≠ . 18	
RIO GRANDE (N) New Mexico	1.16	-2.65	2.70	84	
RIO GRANDE (S) New Mexico	1.66	86	1.09	32	
FECCS River, New Mexico	3.26	47	1.31	18	

^{1/} Preliminary analysis by U. S. Weather Bureau from data furnished by Meterorological Service of Canada and U. S. Weather Bureau.

^{2/} Departure from 15-year (1938-1952) drainage division average.

^{3/} Selected Stations.

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COOPERATIVE SNOW SURVEYS

April 1k 1956

April 1k 1956 Show Cover Measurements											
					ow Cover	Measur					
Drainage Basin				1956				Record			
and	Number	Elev.	Date	Snow	Water	-	Conter		Years		
Snow Course			of	Depth	Content			Average	or		
			Survey	(In.)	(In.)	1955	1954	1938-52	Record		
	1		CO	LORADO	RIVER		•		**		
COLORADO RIVER	(Above (Glenwoo									
Cameron Pass*	5J1	10300	3/26	74	30.5	18.9	22.0	21.8	20		
Park View*	6J2	9200	3/30	36	8.3	7.8	7.1	10.6	20		
Phantom Valley	5J4	9300	3/30	38	12.2	9.2	9.1	10.5	20		
Hoosier Pass	6K1	11400	3/30	49	16.5	12.3	10.8	12.7	20		
Berthoud Pass	5K3	9700	3/30	52	16.1	12.6	10.9	16.1	20		
Tennessee Pass	6K2	10200	3/30	42	12.6			9.8	20		
N.Fork Camp Gr.		9000	3/29	33	8.8	7.0 7.1	7.3 7.8	10.3	20		
Fiddler Gulch		11000									
	6K5 5J7		3/31	59	20.7	13.2	12.6	16.5	19 18		
Lulu		10200	3/31	62	22.5	12.7		17.7	18		
Willow Creek P.		9500	3/30	47	14.8	11.2	11.7	13.5	18		
N.Inlet Grand L		9000	3/29	34	10.2	8.5	6.7	9.9	18		
Lake Irene	5J10	10600	3/29	74	27.9	17.7	17.1	22.3	18		
Arrow	5K6	9900	3/30	39	12.1	10.3	8.1	10.5	18		
Lapland //o	5K7	9500	4/2	39	11.6	10.6	8.1	12.0			
Fremont Pass #2		11400	3/28	61	19.8	14.1	13.0	16.6	20		
Lynx Pass	6K6	9100	3/29	44	12.2	11.9	9.8	13.3	20		
Shrine Pass	6K9	10500	3/30	64	22.5	13.7	11.5	18.4	14		
Grizzly Peak	5K9	11250	3/28	71	26.4	13.2	13.0	19.1	14		
Glen-Mar Ranch	6K20	8850	3/29	29	7.6	5.2	6.5	10.3	9		
Monarch Lake	5114	8500	3/30	41	12.9	11.4	10.7	12.9	8		
Granby	5116	8700	3/29	35	10.7	7.0	5.7	2_ `	7		
Grand Lake	5J19	8600	3/30	39	11.3	8.6	6.0		7		
Berthoud Summit		11300	3/28	63	23.0	15.5	15.1		2		
Frazer View	5K15	10600	3/28	45	15.8	11.0	8.3		2		
Gore Pass	6J11	8900	3/29	41	12.4	10.8	6.1		5		
Frisco	6K13	9300	3/30	35	10.2	6.3	4.2	44-44	5		
Snake River	5K16	9700	3/29	39	11.4	6.6	5.0		5		
Summit Ranch	6K14	10000	3/28	36	10.4	8.6	5.8		75555554		
Vail Pass	6K15	10000	3/30	64	25.3	15.2	11.0				
Pando	6K19	9500	3/30	38	13.9	9.7	9.0		4		
ROARING FORK											
	(1	3.05.00	2/20	-1	70.1	30.0	71 0	707	0.0		
Ind Pass Tunnel		10700	3/30	56	19.4	12.0	14.9	18.7	20		
North Lost Trail		9200	4/2	38	14.9	12.5	9.6	14.8	19		
Nast	6K 6	8700	3/31	19	5.8	5.3	2.9	6.2	19		
Ivanhoe	6K10	10400	3/26	66	24.6	17.3	14.1	18.5	8		
GREEN RIVER IN	AYOMT NO.										
Dutch Joe	9G5	8700	3/29	35	9.4	8.2	11.9	8.2	17		
Mulligan Park	9 ^G 1	8900	3/25	41	12.0		12.3	10.7	20		
Kendall R.S.	10F15	7900	3/28	43	14.6		11.4	11.1	19		
Loomis Park	10F15	8500	3/24	71	26.4	15.1		16.9	20		
Snyder Basin RS.		80110	3/24	(<u>T</u>	20.4		18.4	13.9	19		
Piney-LaBarge	10G10	8820				12.2	22.9	18.5	19		
		0020				10.4	66.7	1000	1)		
won adjacent dre	nnara										

^{*}On adjacent drainage

NS - No Survey ***Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

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COOPERATIVE SNOW SURVEYS

April 1, 1956

Snow Cover Measurements										
Drainage Basin			I	1956						
and	Number		Data		Water		ast Re		1 77	
Snow Course	Mamber	Elev.			1	Water	Conte	nt (In.)	Years	
Chow Course			of		Content	3000	7051	Average	of	
			Survey	(In.)	:	1 1722	1954	1938-52	Record	
		C	OLORADO	RIVER I	DRAINAGE				**	
YALIPA RIVER					-	-		•		
Dry Lake	6J1	8300	3/30	60	24.0	1673	17.2	20_3	20	
Columbine Lodge*	6J3	9300	3/28	71	27.9	22.3	15,0	23.5	20	
Elk River	6JL	8700	3/30	45	17.6	17.0	15.8	17.4	20	
Lymx Pass*	6J6	9100	3/29	44	12,2	11.9	9,8	13.3	20	
Routt Line	6J8	9700	3/28	100	41.5	32.6	29.0	DARKER	5 5 5	
Rabbit Ears	6J9	9550	3/28	80	31.9	23.3	22.3	en-can	5	
Yampa View	6J10	8500	3/28	74	17.0	14:1	10,2	Carped		
Old Battle*	6H10	9800	3/30	82	34.8	25.3	25.9	32.7	20	
WHITE RIVER			. /-	١		_				
Burro Mountain	7K1	9000	4/1	49	17.0	16,0		19.1	19	
Rio Blanco	7J1	8500	3/30	51	18,0	16.3	12,0	16.2	20	
PLATEAU CREEK	01	20000	0 /07		-			- 2 -		
Mesa Lakes	7K4	10000	3/31	44	14.9	17.6		18.2	19	
Trickle Divide	71.5	10000	3/29	69	24.9	25.4	25.2	29.7	16	
GUNNISON RIVER										
Crested Butte	6Ll	9000	2/20	1.2	7 4-1	70.0	0.0	35 0	00	
Park Cone	6T5	9700	3/30 3/30	43	15-4	12.0	9.8	15.2	20	
Alexander Lake	7K3	10000	3/29	71	11.5	9.9	9.9	10.8	19	
Ironton Park	7116	9800		53	20.0	21.0	20.3	24.1	19	
Trickle Divide		10000	3/29 3/29	39	13.6	9,0	5.6	14.4	19	
Park Reservoir	7K6	9500		69	21:-9	25,4	25,2	29.7	16	
Porphyry Creek		10800	3/29	65	25.3	24.0	23,2	27.4	16	
Kannah Cr.		10700	3/30	49	17.4	12.5	10.1	17.5	16	
Lake City			Est.	48	17:0	22.8	22.0	26,8	9	
Spring Cr. Pass*		10300	3/30	20	5.5	6-4	NS	*******	7	
		10900	3/29	34	10:0	5-5	7.6	ROBITOR	7	
Cochetopa Pass* NcClure Pass		10000	3/30	23	5.6	2-9	3-3	OWNERS .	7	
Red Mt. Pass	7K8 7M15	9500	4/1	41	15.0	14.9	9.0	10700	6	
ned no. rass	しまする	11000	4/2	89	32.4	22.3	25.9	PHI, \$100	5	
SAN JUAN RIVER					_		_	_		
Wolf Creek Pass*	611	10000	3/30	72	31-3	20:0	21, 2	ד רכ	20	
Upper San Juan		10000	3/30	73 7 7	34.8	20,0		31.1	20	
Granite Peaks	7117	7950	3/20	0	0.0			34.6	20	
La Plata	7.10	9700	1, 2	23	10.0	10.1	0.5	7.0	15 6	
Wolf Creek Summit		11000		82	32,6	17.7		*****	5	
Chama Divide*	6N2	7750	3/31	0	0.0		0.4	2.6	16	
Chamita*	6N3		3/31	8	2.8	4.8	8.3	9.6	17	
		0,00	2/) =		-,0	4.0	0.0	7.0	14	

NS - No Survey

^{*} On adjacent drainage

^{**} Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

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COOPERATIVE SNOW SURVEYS

April 1, 1956

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Drainage Basin				1956			ast Re		
and	Number	Elev.		Snow		Water	Conten	t (In.)	Years
Snow Course		-	Of		Content			Average	Of
			Survey	(In.)	(In.)	1955	1954	1938-52	Record
							•		**
		CO:	LORADO 1	RIVER	DRAINAGE				
ANIMAS RIVER		-1	. /-					-4.4	
Silverton Sub. S.	7114	9400	4/2	16	4.3	5.0		5.4	20
Ironton Park*	7116	9800	3/29	39	13.6	9.0	5.6	14.4	19
Cascade	71/15	8850	4/2	38	12.1	9.0		12.8	20
Spud Mt.		10700	4/2	70	26.2	16.3		and the same of th	_5
Molas Lake		10500	4/2	36	11.7	10.3	6.7		, 5
Howardville	71/13	9800	4/2	36	10-9	8.3		****	55555
Mineral Creek		10300	4/2	49	14.3	11.8		-	. 5
Red Mt. Pass*	71115	11000	4/2	89	. 32.4	22.3	25.9	phopses.	5
TO LODING DITIES									
DOLORES RIVER	1771 178	0.000	1 /0	20	ol	٠. ٦		0	00
Rico	71/1	8700	4/2	10	3-4	5.0	3.7	8.6	. 20
Telluride	7M2	8600	3/30	18	5-9	4.2	1.3	7.4	20
Lizard Head		10300	3/30	54	13.8	7.4		17.1	19
Trout Lake	7M9	9700	3/30	47	14.1	9.3	9.8	-	7
GILA RIVER									
Frisco Divide	8S1	8000				0.0	0.0	0.6	18
State Line	9S8	8000			~	0.0	0.0	0.6	18
Taylor Creek	7S1	7850	3/31	0	0.0	0.0	0.0	0.1	14
Inman	7S2	7800	3/31	ő	0.0	0.0	0.0	0.1	10
Nutrioso	954	8500	2/ 24	U	0.0	0.3	0.0	0.6	18
Beaver Head	9S6	8000				0.0	0.0	1.0	18
Coronado Trail	957	8000				0.0	0.0		18
Rose Canyon	10T2	7300				0.0	0.0		8
Bear Wallow	10T1	8100	3/30	0	0.0	0.0	0.0	2,2	8
		0.200	J/ JC		0.0	0,0		-,-	
VERDE RIVER					-	-			
Iron Springs*	12R2	6200	4/1	0	0.0	0.0	0.0	0.0	10
Camp Wood	12R1	5700	4/1	0	0.0	0.0	0.0	0.0	10
Mingus Mountain	12R3	7100	.,		•	0.0	0.0	0.0	9
Morman Lake*	11R4	7350				0.0	3.9	8-4	9
Fort Valley*	11P2	7350	3/30	0	0.0	0.0	2.1	1.9	9
Chalendar*	12P1	7100			·	0.0	0-3	2.8	9
Munds Park	11R1	6500				0.0	1.5	-	9
Casner Park	11R2	6950				NS	3.3	artiges .	6
Mormon Mt.	11R3	7500				NS	5.9	Mass.	
Happy Jack	11R5	7630				0.0	2.4	Troping.	6 5

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On adjacent drainage Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

NS No Survey

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-14-COOPFRATIVE SMOW SURVEYS

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						w Course				
	Drainage Basin		-		1956				cord	
	and	Number	Eleve		Snow	Water	Water	Conten	t (In.)	Years
	Snow Course			of		Content			Average	of
_		renikasiania wataumenee erwanaunasia		Survey	(In _o)	(In.)	1955	1954	1938-52	Record
	Tribut B. W. W. A. C. C. B. ST. ST. ST. ST. ST. ST. ST. ST. ST. ST		CO.	LCRADO I	RIVER I	DRAINAGE			_	
	WILLIAMS RIVER	7.070	(000		•	0.0	0.0	0 -0	0.0	7.0
	Iron Springs	12R2	6200		0	0,0	0.0	0,0	0.0	10
	Camp Wood*	12R1	5700		0	0.0	0.0	0.0	0,0	10
	Willow Ranch	13P1	5000		0	0.0	0.0	esc.mo	0.0	10
	LOWER COLORADO RIV	ER				~ <i>,</i>	word.		-	
	Bright Angel	12N1	8400	3/31	11	2-9	7.0	10,6	9-3	9
	Grand Canyon	11P1	7500	3/31	0	0.0	0.0	1,6	1.5	9
	Fort Valley	11P2	7350	-,-	0	0,0	0,1	2,1	1.9	9
	Chalender	12Pl	7100			·	0,0	0,3	2.8	9
	OATH DEST								-	
	SALT RIVER	7.00/	B 000	2/20	_	0.0	0.0	0.70	0.0	2.00
	Forest Dale	10R6	7000	3/30	0	0.0	0.0	0,0	0.0	17
	McNary	9R2	7200	3/30	0	0.0	0.0	0.0	0.2	17
	Nutrioso Coronado Trail	9S4	8500 8000				0.3	0.0	0,6	18
	Milk Ranch	9S7		3/30	0		0.0	0.0	1.5	18
		9R1	7000 5860		0	0.0	0.0	0-0	0.0	1/1
	Workman Creek Maverick Fork	10S 1 9S2	9020	3/27	0	0.0	0.0	1-2	5.9	4
	Baldy	952 9S1	8125				0.0	7.5	are too	0
	Fort Anache					-	0,0	5.1	6400	6
	Pacheta	9R5 9S5	9160 7800	2/20	^	0.0	4.3	7.4	WHITE	6 1 ₁
	racheta	705	1000	3/30	0	0.0	0.0	0.0	FARS	4
	LITTLE COLORADO RI	VER							-	
	Forest Dale*	10R6	6450		0	0.0	0.0	0-0	0-0	17
	McNary	9R2	7200		0	0,0	0.0	0.0	0.2	17
	Nutrioso*	954	8500			- 3 -	0,3	0.0	0,6	18
	Mormon Lake	11RL	7350				0.0	3.9	8,4	9
	Fort Valley	11P2	7350		0	0.0	0.0	2-1	1.9	9
	Mormon Mt.	11R3	7500					2.1	enoso	9 6 5
	Happy Jack	11R5	7630				0.0	2,4	empty	5
	Gentry	10R5	7600				0.0	0.6		_
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NS No Survey

^{*} On adjacent drainage

^{**} Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

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COOPERATIVE SNOW SURVEYS

April 1, 1956

April 1, 1956 Snow Course Measurements											
Denimara Pagin	- 1			1956	SHOW CO.	orse M		t Record			
Drainage Basin and	Number	Elev.	Date	Snow	Water	Wate		ent (In.)	Years		
Snow Course	Number	DIGA.	of	Depth	Content	<i>"a.ue</i>	1 00110	ciro (IIIe)	of		
Diton Course			Survey		(In.)	1955	1954	Average	Record		
					handa - s - s - s - s - s - s - s - s - s -			8-1-	**		
		GREEN	RIVER I	DRAINAG	E IN UTA	H					
UPPER GREEN RIVER	1					0 .					
Hewinta R.S.	1014	9500	3/29	33	9.5	8.3	NS	9.9	22		
Hole-in-Rock	10J3	9150	3/27	16	4.4	6.1	6.2	6.4	25		
King's Cabin (U)	9J1	8800	3/28	31	10.0	10.4	13.5	11.4	26		
King's Cabin (L)	9J2	8600	3/28	28	8.3	7.9	10.7	10.4	26		
DUCHENSE RIVER											
Lake Fork Mt.	10J10	10500	3/27	44	15.0	13.8	12.4	13.0	25		
Paradise Park	9J3	10500	3/26	1.8	15.9	13.4	16.0	13.7	24		
Mosby Mt. (L)	935	9500	NS	NS	NS	11.7	13.1	12.4	26		
Brown Duck Lake	10J9	10300	3/29	57	21.5	NS	16.1	20.6	12		
Indian Canyon	10K1	9100	3/30	26	9.1	11.0	11.2	11.4	26		
PRICE RIVER											
Indian Canyon	10K1	91.00	3/30	26	9.1	11.0	11.2	11.4	26		
Gooseberry Res.	11K7	8700	3/31	45	17.7	15.9	14.7	20.8	28		
Staley Ranch	11K7	7600	3/31	6	2.0	5.7	0.0	6.6	20		
Dry Valley Divide	11K8	7800	3/29	25	9.5	11.3	9.5	10.8	21		
Hntngtn-Horseshoe	11K5	9800	3/31	50	19.2	18.2	19.2	26.3	26		
Mud Creek	11K6	8600	3/29	29	10.7	13.7	14.3	nih sib	7		
SANRAFAEL RIVER		COLCRA	DO RIVER	t DRAIN	AGE IN U	IAH					
Hntngtn-Horseshoe	11K5	9800	3/31	50	19,2	18.2	19.2	26.3	26		
Seeley Creek R.S.	11K9	10000	3/30	36	12.8	11.3	14.3	16.8	26		
20010J 0100K 1105	/	10000	2/20	J U	2200	1100					
VIRGIN RIVER											
Long Valley Jnct.	12M6	7500	3/26	0	0.0	0.0	3.9	5.5	19		
Harris Flat R.S.	12M5	7700	3/26	0	0.0	8.5	10.8	9.4	25		
Duck Creek R.S.	12114	8560	3/26	25	9.6	11.5	17.1	17.4	21		
Cedar Breaks	12M1	10200	3/30	49	19.2	20.4	25.6	25.0	21		
Webster Flats	12M3	9200	3/30	28	10.8	14.7	21.4	19.8	29		
COLORADO R. (S.E.		00.55	1/0	7.0	۲ 0	700	2 1	73 C	٥٢		
LaSal Mt.	9L1	8800	4/2	18	5.8	10.0	7.4	11.5 15.3	25 26		
Buckboard Flat	9M1	9000	4/2	26	8.4	14.0	12.4	19.9	20		

NS - No Survey
*** Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

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COOPERATIVE SNOW SURVEYS

April 1, 1956

April 1, 1956											
D	Snow Cover Measurement										
Drainage Basin				1956	1787	Past Record Water Content (In.)			37		
and	Number	Elev.	Date of		Water		Conte		Years of		
Snow Course			Survey		Content (In.)	1955	1954	Average 1938-52	Record		
		<u> </u>		(In.)	-	17722	11704	1930-32	**		
		RI	O GRANDE	DRAIN	AGE				7.7		
RIO GRANDE IN COLORA			- /			21 2	-0 -		0.0		
Wolf Creek Pass	6M1	10000	3/30	73	31.3	24.2	18.3	31.1	20		
Upper Rio Grande	6M2	9350	3/31	18	4.4	4.8	3.8	7.0	18		
Silver Lakes	6M4	9600	3/30	20	6.2	3.0	1.2	4.9	19		
River Springs	6M5	9300	3/30	16	5.1	3.5	1.9	7.6	19		
LaVeta Pass #2	5M1	9300	4/2 3/28	10	3.5	7.7	5.7	9.7	20		
Summitville Cumbres Pass #2	6M6 6M7	11500	3/20	59 1.0	18.0	14.9	10.4	21.7	16		
The state of the s	61vi 8	10000		48	18.0	13.2	17.6	22.7	20		
Santa Maria Culebra	5M3	9700 10000	3/31	7 12	2.8	2.1	1.2 7.7	4.7	17 16		
Ft. Garland	5M4	8200	4/6 3/31	0	3.8 0.0	0.0	0.0	11.7 2.7	16		
Pla toro	6M9	9950	3/29	42	15.3	13.5	8.8	~ 0	7		
West Conejos	6M10	9450	3/29	23	8.3	6.8	2.7	000 000	7		
La Manga	6M11	10100	3/30	52	18.1	18.7	13.1		7		
Pyramid	6iv12	10300	3/27	29	9.1	7.8	6.1	usin siliti	7		
Spr.Creek Pass	61V13	10900	3/27	26	6.9	7.6	5.2	-	7 7		
Pool Table Mt.	6W14	10000	3/26	11	2.8	5.3	3.6	-	7		
Lake Humphreys	6N15	9300	3/26	12	2,9	2.6	3.5	wa-e	7		
Cochetopa Pass	6L6	10000	3/30	23	5.6	3.3	4.0	Clim spre	7		
Howardville*	7M13	9800	4/2	36	10.9	10.0	6.7	oug each	ż		
Red Mt. Pass*	7M15	11000	4/2	89	32.4	25.7	23.3	-	5		
Porcupine	6M16	10400	3/27	30	8.1	10.1	6.2		7775545		
Wolf Creek Summit	6M17	11000	3/30	82	32.6	25.0	17.9		5		
			-, -								
UPPER RIO GRANDE											
Wolf Creek Pass	6M1	10000	3/30	73	31.3	24.2	18.3	31.1	20		
Upper Rio Grande	6M2	9350	3/31	18	· 4.4	4.8	3.8	7.0	18		
Santa Maria	6M8	9700	3/31	7	2.8	2.1	1.2	4.7	17		
ALAMOSA RIVER			,					1 -			
Silver Lakes	6MLi	9600	3/29	20	6.2	3.0	1.2	4.9	19		
Summitville	6M6	11500	3/28	59	18.0	111.9	10.4	21.7	16		
CONTRACT DELETE											
CONEJOS RIVER	17.05	0200	2/20	76	ر ع	ם ר	7 0	7.6	19		
River Springs	6M5	9300	3/30	16 48	5.1 18.0	3.5 13.2	1.9	22.9	20		
Cumbres Pass #2 Platoro	6îvî 7 6îvî 9	10000 9950	3/31 3/29	40	15.3	13.5	8.8	~~ • 7	7		
West Conejos	6M10	9450	3/29	23	8.3	6.8	2.7		7		
La Manga	6M11	10100	3/30	52	18.1	18.7	13.1		7		
na manga	OMITI	10100	2/ 50) [TO • T	10.1			'		
CULEBRA RIVER											
Culebra	5M3	10000	4/6	12	3.8	10.0	7.7	11.4	16		
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NS - No Survey

* On adjacent drainage

** Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged

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-17-COOPERATIVE SNOW SURVEYS

April 1, 1956

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Drainage Basin			1956			Fast Record				
and	Number	Elev	Date		Water	Water	Conte	nt (In.)	Years	
Snow Course			of Survey		Content (In.)	1955	1954	Average 1938-52	of Record	
		RIO GI	RANDE DE	MINAGE	(New Mex	cico)**				
CHAMA RIVER Cumbres Pass #2 Pay Role Chama Divide Chamita Bateman	6M7 6N1 6N2 6N3 6N4	7750 8500	3/31 3/29 3/31 3/31 3/29	48 5 0 8 30	18.0 1.3 0.0 2.8 8.6	8.0 3.4 0.0 4.8 7.9	13.2 5.6 0.4 8.3 8.6	22.9 9.7 2.6 9.6	20 16 16 14 6	
FECOS RIVER Aspen Grove* Pancheula #2 Fig Tesuque*	5P1 5P2 5P3		3/29 3/30 3/29	0 0	0.0 0.0 0.0	0.6 0.0 0.3	1.8	3.4 2.2 5.4	19 19 14	
RIO GRANDE Red River Taos Canyon Aspen Grove Tres Ritos Pay Role Chama Divide Chamita Cordova Pancheula #2 Big Tesuque Elk Cabin Rio En Medio Quemazon Bateman Fenton Hill	5N1 5N2 5P1 5N4 6N1 6N2 5N5 5P2 5P3 5P4 5P5 6P1 6N4 6P2	9000 9100 9000 9700 7750 8500 10100 8300 10000 9500 9300	3/30 3/29 3/30	5 4 0 2 5 0 8 2 0 0 0 4 14 30 1	1.6 1.7 0.0 0.5 1.3 0.0 2.8 6.3 0.0 0.0 0.0 0.0 1.4 4.2 8.6 0.4	4.1 3.3 0.6 0.8 3.4 0.0 4.8 5.0 0.3 0.9 0.9 0.9	4.6 2.6 1.2 5.6 4.3 8.0 3.4 8.7 6.7 8.8 7.6 8.8	7.9 5.7 3.4 5.2 9.7 2.6 9.6 12.8 2.2 5.4	19 17 19 18 16 16 14 14 19 14 7 6 6 6 6	
CANADIAN RIVER Hematite Park Tres Ritos* Cordova*	5N3 5N4 5N5	9500 9000 10100	3/28	2 2 20	0.6 0.5 6.3	2.2 0.8 5.4	2.8 1.2 8.8	5.2 5.2 12.8	19 18 14	

*On adjacent drainage

^{**}Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged.

NS - No Survey

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-18-COOPERATIVE SNOW SURVEYS

April 1, 1956

Snow Cover Measurements											
D											
Drainage Basin				1956		725					
and	Number	Elev.	Date	Snow	Water		Conte	$nt\;(In_*)$	Years		
Snow Course			of	Depth	Content			Averace	of		
			Survey	(In.)	(In.)	1955	1954	1938-52	Record		
PLATTE RIVER DRAINAGE **											
SWEETWATER RIVER											
Grannier Weadows	8G4	9000	4/2	51	17.2	14.4	20.8	14.1	19		
South Pass*	8G3	9000	4/1	53	20.0	14.6	21.8	14.6	16		
Larsen Creek	9G6	9000	4/ 1	22	20.0			14,0	6		
Larsen oreek	900	9000				5.4	10.4		0		
NO TO A MINITED TO TELEVISION											
NO. PLATTE RIVER	~	20000	2/01	51	20.7	70.0	00 0	07. 0	00		
Cameron Pass	5J1	10300	3/26	74	30.5	18.9	22.0	21.8	20		
Park View	6J2	9200	3/30	36	8.3	7.8	7.1	10.6	20		
Columbine Lodge	6J3	9300	3/28	71	27.9	22.3	15.0	23.5	20		
Williow Cr. Pass*	6J5	9500	3/30	47	14.8	11.2	11.7	13.5	18		
Northgate	6J7	8500	3/30	25	6.8	4.8	5.9	***	6		
Bottle Creek	6н8	8200	3/30	42	15.1	14.1	13.9	14.3	20		
Webber Spring	6Н9	9000	3/30	51	20.2	1.6.7	15.5	19.2	20		
Old Battle	6H10	9800	3/30	82	34.8	25.3	25.9	32.7	20		
	6H4	10200	3/28	80					18		
N.French Creek					31.8	24.1	27.0	30.6			
N.Barrett Creek	6H5	9400	3/28	61	21.3	18.8	17.7	20.L	20		
Ryan Fark	6н6	8400	3/28	37	10.8	11.7	10.2	11.7	20		
Spring Creek	6H7	9000	4/2	50	16.1	14.7	13.6		7		
Albany	6H11	9400	3/27	45	16.3	9.7	9.7	400 1000	7		
La Bonte	5G2	8450				9.9	6.4	coat coat	7		
Boxelder	5G1	9000	4/3	25	4.2	8.4	9.1	-	6		
LARAMIE RIVER											
Roach	6J8	9800	3/26	65	25.1	15.7	19.3	19.5	16		
Deadman Hill*	5J6	10200	3/29	60	23.2	13.7	14.2	15.5	19		
McIntyre	5J15	9100	4/1	42	11.9	8.3	9.2	100 000	6		
Brooklyn Lake	6H1	10200	3/28	73	30.5	18.7	22.6	22.6	20		
Fox Park	6H12	9200	3/28	25	5.9	4.0	6.3	9.1	20		
Pole Mtn. #2*	5H1	8700	3/28	16	5.8	4.8	3.7	5.6	20		
			3/27	36	12.1	7.1	9.1	10.3	20		
Libby Lodge	6H3	8700	3/21						20		
Hairpin Turn	6H2	9500	3/28	41	14.6	8.5	9.6	11.9			
Albany	6H11	9400	3/27	45	16.3	9.7	9.7	· ·	7		
POUDRE RIVER			, ,			- 0 -		07. 0	0.0		
Cameron Pass	5J1	10300	3/26	74	30.5	18.9	22.0	21.8	20		
Chambers Lake	5J2	9000	3/26	32	10.5	7.0	5.4	8.2	20		
Big South	5J3	8600	3/26	7	2.3	0.2	1.6	2.8	20		
Deadman Hill	5J6	10200	3/29	60	23.2	13.7	14.2	15.5	19		
Lake Irene*	5J10	10600	3/29	74	27.9	17.7	17.1	22.3	18		
Hour Glass Lake	5J11	9500	3/28	33	10.8	6.1	5.6	9.1	16		
Red Feather	5J20	9000	3/29	30	11.6	8.1	6.4	quan dural	7		
Lost Lake	5J23	9300	3/26	43	13.8	9.8	9.3	***	5		
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*On adjacent drainage **Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged NS - No Survey

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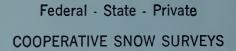
COOPERATIVE SNOW SURVEYS

April 1, 1956

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Drainage Basin		1	Snow Cover Measurement 1956 Past Record						
and	Number	Elev.			Water Content (In.)			Years	
Snow Course	li alioot		of	1	Content	110002	1	Average	of
			Survey	i		1955	1954	1938-52	Record
	· · · · · · · · · · · · · · · · · · ·	P	LATTE R					-	**
BIG THOMPSON RIVER	2								
Lake Irene*	5J10	10600	3/29	74	27.9	17.7	17.1	22.3	18
Hidden Valley	5J13		3/30	46	15.4	9.1	10.8	12.5	15
Deer Ridge	5J17	9050	3/30	23	7.5	5.2	3.7		7
Longs Peak	5J22	10500		45	15.4	9.7	7.4	****	4
Two-Mile	5J26	10400	3/30	58	20.8	11.8	13.8		3
ST. VRAIN RIVER									
Wild Basin	5J5	10000	3/30	47	16.4	8.6	11.4	14.6	20
Copeland Lake	5J18		3/30	18	5.4	4.3	4.3		7
Ward	5J21		3/30	24	8.1	4.4	5.3	ear 400	6
DOLL DED ODEEN									
BOULDER CREEK E.Port.Moffat T.	5K1	91,00	3/30	16	5 . 6	4.3	2.9	3.8	20
University Camp	5J8	10300		70	29.7	17.6	19.3	22.6	18
Moffat	5 J 12		3/30	30	11.6	6.5	4.7		6
			2/2						
CLEAR CREEK									
Loveland Pass	5K5	10600		60	21.2	13.5	11.2	16.4	20
Grizzly Peak*	5K9	11250		71	26.4	13.2	13.0	19.1	18
Empire	5K10		3/28	31	8.9	5.9	5.7		7
Berthoud Falls	5K13	10500		47	14.3	12.0	10.7	ean erin	5
Clear Creek	5K17	11200	3/20	62	21.5	13.2	12.1	-	5
SOUTH PLATTE RIVER									
Hoosier Pass	6K1	11400	3/30	49	16.5	12.3	10.8	12.7	20
Fairplay	6K2	10000		Ő	0,0	2.5	0.0	1.2	19
Jefferson Cr.	5K8	10100		38	10.5	9.5	8.8	9.1	16
Geneva Park	5K11		3/30	14	4.2	5.0	1.4		7
ADKANGAG DITTED			ARKA]	MSAS DR	AINAGE				
ARKANSAS RIVER Tennessee Pass	6K2	10200	2/30	42	12.6	7.0	7.3	9.8	20
Twin Lakes T.	6K3	10200		38	11.2	6.9	9.6	10.8	20
La Veta Pass*	5M1	9300		10	3.5	4.4	7.7	9.7	20
4 Mile Park	6K7		3/29	13	3.4	2.5	2.9	3.9	20
Fremont Pass	6K8	11400		61	19.8	14.1	13.0	16.6	20
Blue Lakes	5M2	10000		13	4.6	4.4	6.7	7.0	18
Monarch Pass	6L4	10500		50	16.9	15.4	13.0	19.0	15
Saint Elmo (a)	6L5	10600		30	10.5	7.7	8.6		7
Timberline	6K11	11100		75	29.0	18.4	17.0		7
Cooper Hill	6K16	10600		35	10.9	7.3	6.1		4
East Fork	6K17	10700		42	12.3	8.0	6.2		4
Westcliffe	5 L 2	9000	3/30	11	3.9	2.9	2.6		4

^{**}On adjacent drainage **Courses with less than 15 years record in period 1938-52 have all years prior to 1952 averaged. NS - No survey

⁽a) - Air observed



Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"